INSTALLATION OF AN ADAPTER PANEL, PATCH PANEL, AND AN A/B SWITCH ON THE 56 KBPS DEDICATED AND 14.4 KBPS DEDICATED LINES, FROM THE RPG TO THE RPGOP AND AWIPS

DOPPLER METEOROLOGICAL RADAR

WSR-88D

PUBLISHED UNDER AUTHORITY OF THE SECRETARIES OF
COMMERCE, THE AIR FORCE, THE NAVY, AND TRANSPORTATION

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NWS APPROVAL:

_____Date _____
John McNulty
Chief, Engineering Division

1. SUBJECT

Installation of an Adapter Panel, Patch Panel, and an A/B Switch on the 56 kbps dedicated and 14.4 kbps dedicated lines connecting the Radar Product Generation (RPG) Group to the Radar Product Generation Operational Position (RPGOP) and Advanced Weather Interactive Processing System (AWIPS), respectively.

2. PURPOSE

The purpose of this routine modification is to provide instructions to install A/B switches on the 56 kbps and 14.4 kbps dedicated data lines from the RPG to the RPGOP and AWIPS. In addition, instructions will be provided to install an adapter panel and patch panel to the Principal User Processor (PUP). This modification enables the meteorologist to switch the 56 kbps and 14.4 kbps data rates between the RPGOP and AWIPS. The authority for this modification is Operational Support Facility (OSF) Engineering Change Proposal (ECP) F0104.

Do not accomplish this modification until after Software Note 11 (Build 10.0) has been installed and is operational.

This is a temporary change. As such, EHB 6-501 and EHB 6-530 will not be updated to reflect this equipment. All information relative to these switches as contained in this modification note should be retained for reference by both electronic technicians and operators.

For additional information concerning this modification note, contact the Operational Support Facility, Hotline, Norman, Oklahoma; phone number: (800) 643-3363 or (405) 366-2980 or by email at Hotline@osf.noaa.gov.

3. SITES AFFECTED

See attachment 5.

4. ESTIMATED COMPLETION DATE

The target completion date of this modification is 60 days after receipt of modification document and kits.

5. EQUIPMENT AFFECTED

Principal User Processor (PUP).

Throughout this modification note, the collocated PUP is referred to as the RPGOP. When the PUP operates at 14.4 kbps dedicated interface, the RPGOP becomes an associated PUP (APUP).

6. SPARES AFFECTED

Not applicable.

7. MODIFICATION ACCOMPLISHED BY

Site electronic technicians will install the hardware delivered with this modification and change the necessary software adaptation data. Operational focal points for the RPGOP and AWIPS will need to change the Routine Product Set (RPG) Lists. Two technicians are required to perform these procedures.

8. MATERIAL REQUIRED

Verify the PUP Dedicated 66 Punchdown block containing a 50 pin TELCO plug is available in the WSR-88D PUP Demarcation Frame cabinet, located in the TELCO room. This punchdown block is usually located in the lower right hand corner next to the PUP dial punchdown block. If one is not available, procure the punchdown block and install to return the Demarcation Frame cabinet to the original baseline configuration.

Nomenclature	Part Number	NSN	Qty
KIT AB			
DB 37 A/B Switch	2200043-201	5895-01-458-6309	1
RJ 45 A/B Switch	2200042-301	5930-01-437-0752	1
6 foot M/M DB 37 Cable	2200045-201	NWS9-82-450-0003	1
6 foot M/F DB 37 Cable	2200044-201	NWS9-82-450-0002	1
7 foot RJ 45 Patch Cords	2200046-201	NWS9-82-450-0004	5
Twisted Pair Wire	WC63-5BB4U	6145-01-458-9237	20 feet of cable
Accessories kit (Contents listed below)	2340000-301	NWS9-83-160-0027	1 bag
Labels	2340000-101 thru -104		1 sheet
Washers, Flat	MS15795-841	5310-00-822-9472	4

Nomenclature	Part Number	NSN	Qty
Post, Elec/Mech	NAS1831C3B04		2
Kit A			
Codex 3263 Modem	1219739-202	5895-01-377-7105	1
DTE Cable, DB 25/Micro 26 Connector	1221203-530	5995-01-387-3817	1
Label, Cable	SLSH-2015-5	7690-01-049-1770	1
Tiewraps	MS3367-2-9	5975-00-156-3253	1
Arrester, Electrical[a]	COHP-150	5920-01-390-1340	2
Kit D			
Codex 3263 Modem	1219739-202	5895-01-377-7105	1
DTE Cable, DB 25/Micro 25 Connector	1222302-307	5995-01-407-2893	1
Label, Cable	SLSH-2015-5	7690-01-049-1770	1
Tiewraps	MS3367-2-9	5975-00-156-3253	1
Arrester, Electrical[a]	COHP-150	5920-01-390-1340	2
Kit PP			
Dedicated Adaptor Panel	1219734-201	5895-01-390-8294	1
Dedicated Patch Panel	1213826-201	5805-01-358-4488	1
Adapter to Patch Panel Cable, 41W85	1214745-306	5995-01-390-2562	1
Patch to Entry Panel Cable, 41W2	1214745-301	5995-01-355-4108	1
Entry Panel to Punch-down Cable W323	1214818-301	5995-01-352-3078	1
Plate, Locator, A6	1214845-206	9905-01-417-1918	1
Plate, Locator, A25	1214845-225	9905-01-461-7979	1
Screw Package	MS51958-61	5305-00-059-3657	1 pkg
Washer Package	MS35338-138	5310-00-933-8120	1 pkg
Washer Package	MS15795-808	5310-00-619-1148	1 pkg
Double-sided tape	UU-T-91 TY1CL2	7510-00-550-7815	1 roll

a. Supplied in the kit, but will not be used in the retrofit.

9. SOURCE OF MATERIALS

Kits are requisitioned by the Operational Support Facility (OSF) Logistics Section and shipped at no cost to the site.

10. SPECIAL TOOLS AND TEST EQUIPMENT REQUIRED

Greenlee DB 37 Punch (NSN 5935-01-458-6310).

The Greenlee DB 37 Punch will be managed by each Regional Headquarters. Upon completion of retrofit, contact your regional point of contact for shipping directions of the DB 37 Punch to the next site. The last site, per region, to use the Greenlee DB 37 punch should return it to the National Reconditioning Center (NRC).

11. TIME AND PERSONNEL REQUIRED

Work Phases	Work-hours
Unpacking	1.0
Disassembly	0.0
Installation	2.5
Assembly	0.0
Operational Check	0.5
Total Work-hours	4.0

12. DOCUMENTS AFFECTED

Not applicable.

13. VERIFICATION STATEMENT

This modification was successfully installed at WSFO Dodge City, KS.

14. DISPOSITION OF REMOVED AND REPLACED PARTS/MATERIALS

Not applicable.

15. PROCEDURES

See ATTACHMENTS 1, 2, 3, and 4.

16. REPORTING INSTRUCTIONS

NWS

Report completed modification on WS Form A-26, Engineering Management Reporting System Maintenance Record, according to instructions in EHB-4, Part 2, using reporting code PUP. Also, record the modification number in block 17(a) as 50 (see ATTACHMENT 7 for a completed sample of WS Form A-26).

Complete ATTACHMENT 6 and fax, mail, or e-mail information to:

(1) Mail Address: System Support Branch, Logistics Section
Operational Support Facility
3200 Marshall Ave Suite 101
Norman, Oklahoma 73072-8028

(2) Fax Number: (405) 366-6553
ATTN: Logistics Section

(3) E-mail Address: Logistics@osf.noaa.gov

ATTACHMENT 1

INSTALLATION OF KIT "PP" DEDICATED ADAPTER (41A6) AND PATCH (41A25) PANELS

Tools Required

ESD Component Handling Kit
Screwdriver Set, Phillips
Scissors

Initial Conditions/Preliminary Setup

See Figure 1 for new assembly location. Two technicians are required for this procedure.

Verify the PUP Dedicated 66 Punchdown block containing a 50 pin TELCO plug is available in the WSR-88D PUP Demarcation Frame cabinet, located in the TELCO room. This punchdown block is usually located in the lower right hand corner next to the PUP dial punchdown block. If one is not available, procure the punchdown block and install to return the Demarcation Frame cabinet to the original baseline configuration.

1. Perform the following PUP shutdown procedures:

   a. At the application terminal, enter **S,A<Return>** to get the status of Archive IV.

   b. At the ARCHIVE STATUS screen, if the message `ARCHIVE NOT ACTIVE` is displayed, proceed to step 1.c. If the message `AUTO ARCHIVE... ACTIVE` is displayed, then cancel auto archiving by entering **A,C,A<Return>**.

   c. At the System Console, enter **PUPDOWN<Return>**.

   d. Enter **D TA<Return>** and observe the display. If `TASK(S) NOT FOUND` is displayed, proceed to step 1.f.

   e. Enter **CA** *taskid***<Return>** for each task found to cancel the active task(s).

   f. Enter **ERR LOG,OFF<Return>** to allow disks to be marked off (required only if ERROR LOG function was previously activated).

   g. Enter **MA DSCØ:,OFF<Return>** to mark off disk Ø.

   h. Enter **D D<Return>** and verify that `DSCØ D9 ØØØØ OFF` is displayed.

   i. Simultaneously press the **<Ctrl>** and **V** keys twice and then press **<Return>** to enter the CDS mode and observe that the `CDS>` prompt is displayed.

   j. Enter **Key 1,***password***<Return>**.

   k. Enter **HA<Return>** to halt the CPU.

l. Enter **PO OFF<Return>** to turn off DC Power supplies.

m. Enter **STA 1,28<Return>** to verify that all DC power supplies are off.

n. At the back of the data processor cabinet, turn **OFF** the Swing-Out Power Supply ganged switch, CB1-3.

o. At the back of the data processor cabinet, turn **OFF** the AC Power Distribution Panel, 41A2Ø, main AC switch, CB1.

p. If applicable, set the Power Supply 41PS3 power switch to **OFF**.

q. At the Main Power Control Panel disconnect power to the PUP cabinet.

2. Perform the following steps to reconfigure the PUP cabinet:

NOTE

The following measurements will be taken from the bottom of the PUP cabinet as indicated in Figure 1.

a. Using a tape measure, verify that 41A7's lower mounting hole measures 28 5/16 inches from the bottom of the PUP cabinet (see Figure 1). If yes, proceed to step 2.b., if no, proceed to the next step.

(1) At the front of 41A7 (MicroFive VME Assembly), while one technician supports 41A7, remove the (4) retaining screws.

(2) Move the assembly until the **bottom mounting hole** of 41A7 is 28 5/16 inches from the bottom of the cabinet. (See Figure 1)

(3) Reinstall the (4) retaining screws into 41A7.

(4) If applicable, carefully remove the old A7 label. Using the double-sided tape supplied in the kit, reposition the A7 label to correspond to the new 41A7 location.

b. If necessary, reposition 41A3 by perform the following steps:

(1) While one technician supports 41A3 (Telephone Patch Panel), remove the (4) retaining screws.

(2) Lower the assembly until the bottom of 41A3 touches the top of 41A7.

(3) Reinstall the (4) retaining screws into 41A3.

(4) If necessary, carefully remove the old A3 label. Using the double-sided tape supplied in the kit, reposition the A3 label to correspond to the new 41A3 location.

c. Install the new 41A25 Dedicated Patch Panel (part number 1213826-2Ø1, NSN 58Ø5-Ø1-358-4488) supplied in the kit, as follows:

(1) Using cable 41W2 (part number 1214745-301, NSN 5995-01-355-4108) supplied in the kit, attach one end of the cable to **J2 TELCO** of 41A25 prior to installing 41A25. Drape the other end of cable 41W2 out of the way until further instructions.

(2) Using Figure 1, locate the 41A2 Modem Rack. The 41A25 Dedicaed Patch Panel (part number 1213826-2Ø1, NSN 58Ø5-Ø1-358-4488) will be located under the 41A2 Modem Rack and above the 41A3 Patch Panel.

(3) Attach the 41A25 Dedicated Patch Panel (part number 1213826-2Ø1, NSN 5805-Ø1-358-4488) to the cabinet using the supplied screws and washers. (see Figure 1).

(4) Using the A25 label provided in the kit, place the label on the outside right edge of the PUP cabinet, directly in line with the new 41A25 Patch Panel.

d. Reposition the 41A2 Modem Rack assembly by performing the following steps:

(1) Unlock the modem rack assembly door and swing door completely open.

(2) Locate the two spring loaded hinge pins that hold the door in place.

(3) Squeeze the pins toward each other until they are free, and remove the door.

(4) At the rear of 41A2, remove the 4 rear mounting screws.

(5) Slide the support arms out, and set them aside for future use.

(6) Remove the 4 screws that mount the support arm brackets to the rear rail. Set the screws and brackets aside for future use.

(7) While one technician supports the modem rack, remove the six front mounting screws.

(8) Reposition the modem rack where the bottom of 41A2 touches the top of 41A25, and reinstall the six front mounting screws.

(9) Reposition the rear mounting brackets to the rear rail.

(10) Reinstall the slide support arms, and install the 4 screws to attach the support arms to the rear bracket.

(11) Reinstall and close the front door.

e. Verify that 41A1 is mounted completely to the top of the PUP cabinet. If yes, proceed to step 2.f. If no, perform the next steps:

(1) While one technician supports the rear of 41A1, remove the 8 screws from the front of 41A1.

(2) Position 41A1 so the top of the assembly sits at the top position of the PUP cabinet.

(3) Reinstall the 8 front mounting screws.

f. If your site has a 41A11 (High Speed Modem), perform the following relocation steps if necessary. If no, proceed to step 2.g.

(1) While one technician supports the rear of the 41A11, remove the 4 front mounting screws.

(2) With the high speed modem disconnected, verify the switch settings on the bottom of the modem are as follows:

Switch	RPG	PUP
1	OFF	OFF
2	OFF	OFF
3	OFF	OFF
4	OFF	ON
5	OFF	OFF
6	ON	ON
7	ON	ON
8	ON	ON
9	N/A	N/A
10	OFF	OFF
Rear	IN	IN

(3) Reposition 41A11 until the top of 41A11 touches the bottom of 41A1.

(4) Reinstall the 4 front mounting screws.

g. Remove any mounting screws attached to new cable 41W85 (part number 1214745-3Ø6, NSN 5995-Ø1-39Ø-2562) supplied in the kit. This cable will be installed between "J25 (1-12)" of the 41A6 Adaptor Panel and "J1 MODEM" of the 41A25 Patch Panel.

h. Route and connect cable 41W85 to "J1 MODEM" of the 41A25 Patch Panel, securing with the hook and loop tape installed on the patch panel.

INSTALLATION OF KIT "PP" DEDICATED ADAPTER (41A6) AND PATCH (41A25) PANELS

i. Attach the other end of cable 41W85 (part number 1214745-3Ø6, NSN 5995-Ø1-39Ø-2562) to "J25 (1-12)" on the back of 41A6 and secure with the hook and loop tape.

j. Attach the new 41A6 Adaptor Panel (part number 1219734-2Ø1, NSN 5895-Ø1-39Ø-8294) to the cabinet using the supplied screws and washers above 41A4 Dial Adapter Panel.

k. Using the A6 label provided in the kit, position the A6 label to the outside rail of the PUP cabinet to correspond to the new 41A6 locations.

l. Open the left rear and right front doors of the UD41 cabinets and locate the cable entry panel located at bottom of the cabinet as shown in Figure 2.

m. At the J16 end of the new 41W2 cable (part number 1214745-3Ø1, NSN 5995-Ø1-355-41Ø8), remove the two hex head standoffs.

n. The 41W2 cable (part number 1214745-3Ø1, NSN 5995-Ø1-355-41Ø8) is routed from the 41A25 "J2 TELCO" to J16 of the Cable Entry Panel. Attach this cable to the **FRONT** of the Cable Entry Panel using the hex standoffs removed in the previous step.

o. Attach the W323 P1(41J16) (part number 1214818-3Ø1, NSN 5995-Ø1-352-3Ø78) Connector to the 41W2 J16 (part number 1214745-3Ø1, NSN 5995-Ø1-355-41Ø8) cable after it passes through the Cable Entry Panel. This will be from the **REAR** of the UD41 Cabinet.

p. Route the W323 cable (part number 1214818-3Ø1, NSN 5995-Ø1-352-3Ø78) under the floor to the telephone room and attach to the PUP Dedicated Punchdown Block using the hook and loop tape.

q. Additional connections from the PUP Dedicated Punchdown Block are made under ATTACHMENT 2.

r. Ensure that all connections are solid, and tie wrap for a clean installation.

ATTACHMENT 1 (Continued)

INSTALLATION OF KIT "PP" DEDICATED ADAPTER (41A6) AND PATCH (41A25) PANELS

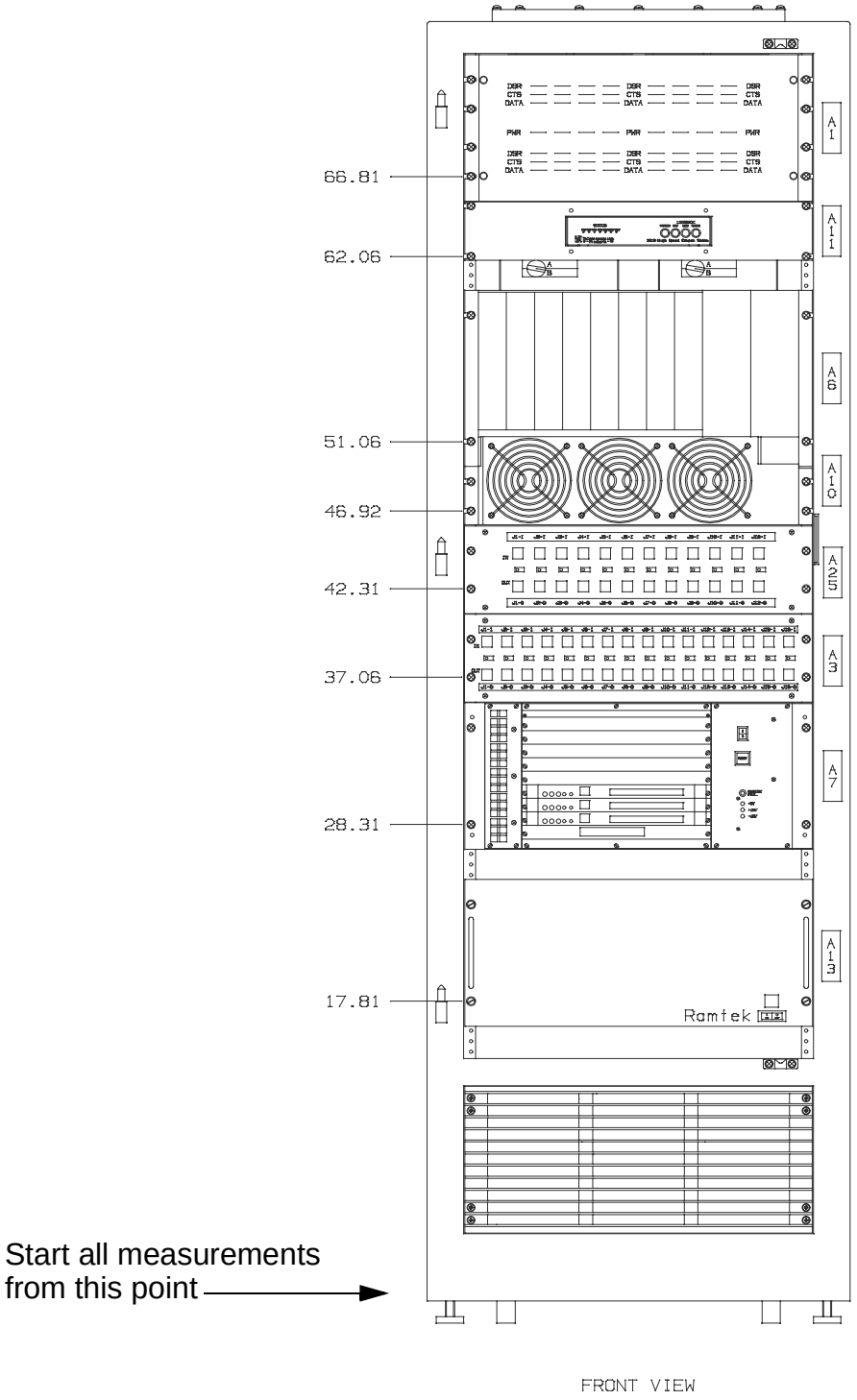


Figure 1 PUP Cabinet Overview (Front)

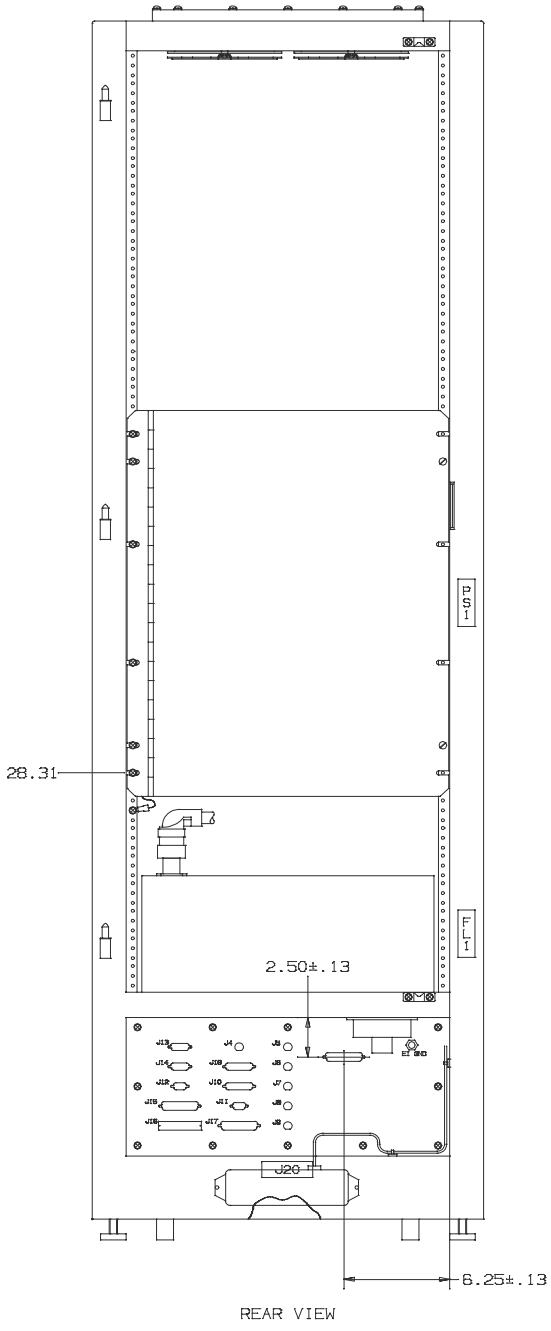


Figure 2 PUP Cabinet Overview (Rear)

ATTACHMENT 2

INSTALLATION OF KIT AB TO INSTALL AN A/B SWITCH TO THE 56 KBPS DEDICATED, 14.4 KBPS DEDICATED LINES

Tools Required:

Drill, electric, 3/8 inch chuck
Drill bit, 7/16 inch
Drill bit, 1/4 inch
Screwdriver set, slot
Nut driver set
Greenlee DB37 punch[1]
ESD component handling kit
Vacuum cleaner/shop vac
Punchdown tool
1 inch diameter socket
Ratchet (to fit)
6 inch extension (to fit)

1. Preliminary Conditions:

   a. Ensure the 5Ø foot (NWS number 4149) or 75 foot (NWS number 415Ø) cable supplied with the AWIPS installation is in place.

   b. The DB25 connector should be attached to the AWIPS VIR, modem 1, as per AWIPS instructions.

   c. The cable is routed under the floor as necessary so the DB37 connector reaches the PUP cable entry panel.

1. Greenlee DB 37 Punch will be managed by each Regional Headquarters. Upon completion of retrofit, contact your regional point of contact for shipping directions of the DB 37 Punch to the next site. The last site, per region, to use the Greenlee DB 37 punch should return it to the NRC.

ATTACHMENT 2 (Continued)

INSTALLATION OF KIT AB TO INSTALL AN A/B SWITCH TO THE 56 KBPS DEDICATED, 14.4 KBPS DEDICATED LINES

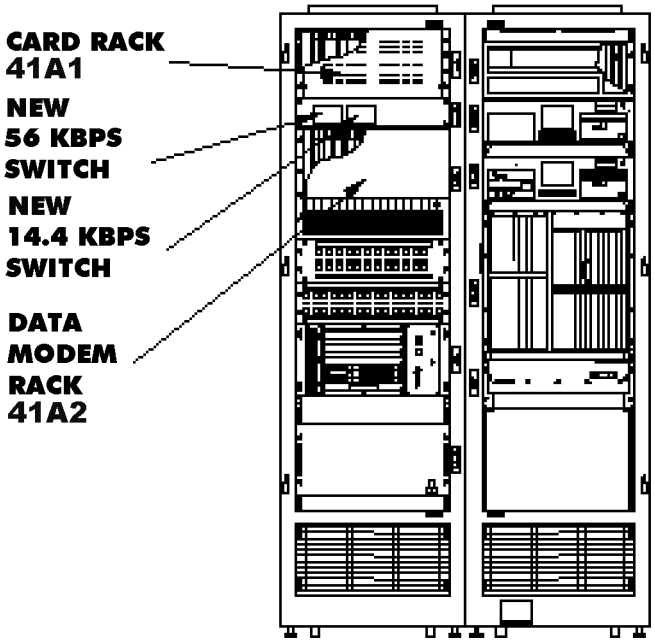


Figure 1 Overview of PUP Cabinet

INSTALLATION OF KIT AB TO INSTALL AN A/B SWITCH TO THE 56 KBPS DEDICATED, 14.4 KBPS DEDICATED LINES

2. Perform the following A/B switch installation procedures:

   a. Using the label provided in the kit, affix the label that reads 14.4 kbps to RPGOP over the **A** printed on the **front** of the A/B switch, NSN 593Ø-Ø1-437-Ø752 (RJ45 connections).

   b. Using the label provided in the kit, affix the label that reads 14.4 kbps to AWIPS over the **B** printed on the **front** of the A/B switch, NSN 593Ø-Ø1-437-Ø752 (RJ45 connections).

   c. Using the label provided in the kit, affix the label that reads 56 kbps to RPGOP over the **A** printed on the **front** of the A/B switch, NSN 5895-Ø1-458-63Ø9 (DB37 connections).

   d. Using the label provided in the kit, affix the label that reads 56 kbps to AWIPS over the **B** printed on the **front** of the A/B switch, NSN 5895-Ø1-458-63Ø9 (DB37 connections).

   e. Position both the 14.4 kbps and the 56 kbps A/B switches on the top front center of 41A2 (Codex Modem Rack). Place the 56 kbps switch to the left side of the 14.4 kbps switch (as viewed from the front). The switches should fit below the 41A1 card rack holding the modem eliminator and protocol converter cards.

   f. At the PUP cabinet cable entry panel, disconnect cables P1(41FL1J1) and P1(FL1-J2), and turn the connections upside down.

   g. From the rear of the PUP cabinet, locate the cable entry panel at the base of the cabinet. The left half of the panel has cables feeding through it. Attach the drilling guide to the panel starting at the upper right hand corner with tape. After checking for interference on the inside of panel, drill a 7/16 inch hole at the location indicated by the drilling guide. Drill two 1/4 inch holes at their respected positions on the drilling guide, and then remove the drilling guide.

   h. Using the supplied Greenlee DB37 punch, enlarge the drilled 7/16 inch hole to DB37 size. Remove any metal chips from inside cabinet. (See Figure 2 for instructions on using the Greenlee #234 hole punch).

ATTACHMENT 2 (Continued)

INSTALLATION OF KIT AB TO INSTALL AN A/B SWITCH TO THE 56 KBPS DEDICATED, 14.4 KBPS DEDICATED LINES

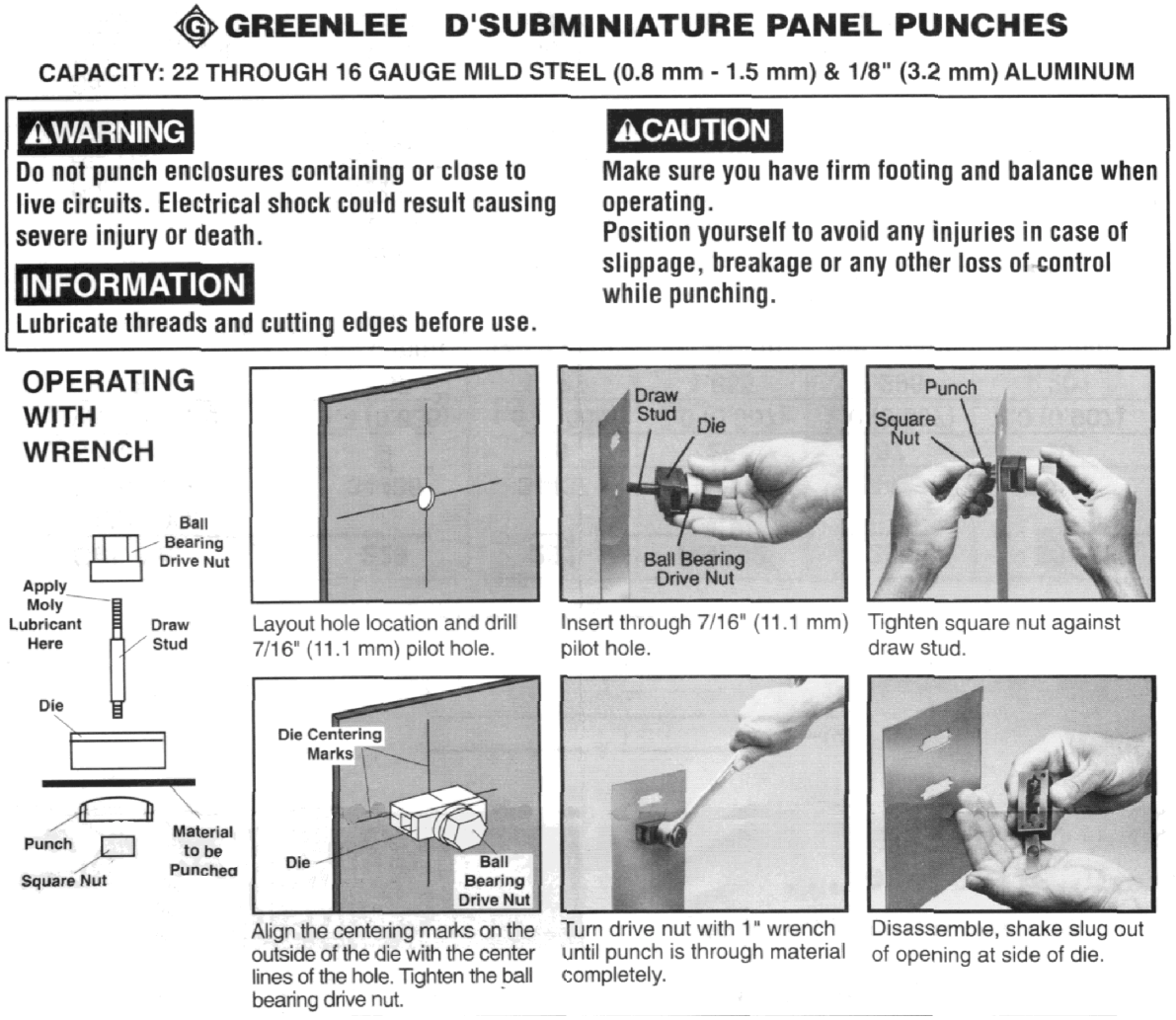


Figure 2 Greenlee DB 37 Hole Punch Instructions

ATTACHMENT 2 (Continued)

INSTALLATION OF KIT AB TO INSTALL AN A/B SWITCH TO THE 56 KBPS DEDICATED, 14.4 KBPS DEDICATED LINES

i. Remove the screws on the female end of cable NSN NWS9-82-45Ø-ØØØ2. Add two washers per screw, and then replace the screws into the female end of the cable.

j. Attach the two supplied barrel nuts to the end of the screws on the female end of cable NSN NWS9-82-45Ø-ØØØ2.

k. Position the female end of cable NSN NWS9-82-45Ø-ØØØ2 on the inside of the newly punched DB37 hole in the cable entry panel and attach it to the cable provided with the AWIPS deployment (NWS 4149 or 415Ø) and tighten.

l. Reattach cables P1(41FL1J1), and P1(FL1-J2).

m. Attach the male end of cable NSN NWS9-82-45Ø-ØØØ2 to Port B of the 56 kbps A/B switch.

n. Disconnect cable 41W26 P2(A1A2J1) from the Modem Eliminator (or High Speed Modem 41W126 P2(A11V.36) if a high speed modem is installed), 41A1A2, located in the card rack above the CODEX rack. This is normally the left hand card, as viewed from the rear of the rack. It is the card with two DB37 connectors side by side. Prior to installation of this kit, this cable runs from the Modem Eliminator/High Speed Modem to the converter (41A2A1).

o. Connect cable 41W26 to port A of the 56 kbps A/B switch.

p. Connect cable NSN NWS9-82-45Ø-ØØØ3 kit AB between the previously opened port of the RPGOP Modem Eliminator or High Speed Modem to the port labeled Input/output on the 56 kbps A/B switch. This completes the 56 kbps dedicated connection.

q. Connect an RJ45 cable between port A of the 14.4 kbps A/B switch and the modem nest backplane as indicated in Figure 4 of Kit A or D instructions (See ATTACHMENT 3, Figure 4). For example, if this is the first 14.4 dedicated line being installed, it would connect to position B1.

r. Connect an RJ45 cable, NSN NWS9-82-45Ø-ØØØ4, between the port labeled input/output of the 14.4 kbps A/B switch and 41A6J1.

s. Connect an RJ45 cable, NSN NWS9-82-45Ø-ØØØ4, between port B of the 14.4 kbps A/B switch and 41A6J12.

t. Tie wrap all loose wires for a clean installation.

u. In the telephone room, locate the punchdown blocks for the 14.4 kbps dedicated and dial data feeds of the RPGOP and AWIPS, and also locate the RPG dedicated data feed to AWIPS. There are four separate blocks involved. If unable to locate, reference Modification Note 43.

INSTALLATION OF KIT AB TO INSTALL AN A/B SWITCH TO THE 56 KBPS DEDICATED, 14.4 KBPS DEDICATED LINES

v. Record the AWIPS to RPG Dedicated Punchdown block pin numbers. At this point you will lose the AWIPS dedicated feed. Operations should be modified.

AWIPS_____RPG_____

w. Remove the existing RPG to AWIPS Punchdown block jumper wires.

x. Connect the RPG to PUP cross-connect as per Figure 3, sheets 2 and 3.

y. Connect the PUP to AWIPS cross-connect as per Figure 3, sheets 2 and 3.

z. This completes the installation of the 14.4 kbps A/B switch portion of kit AB.

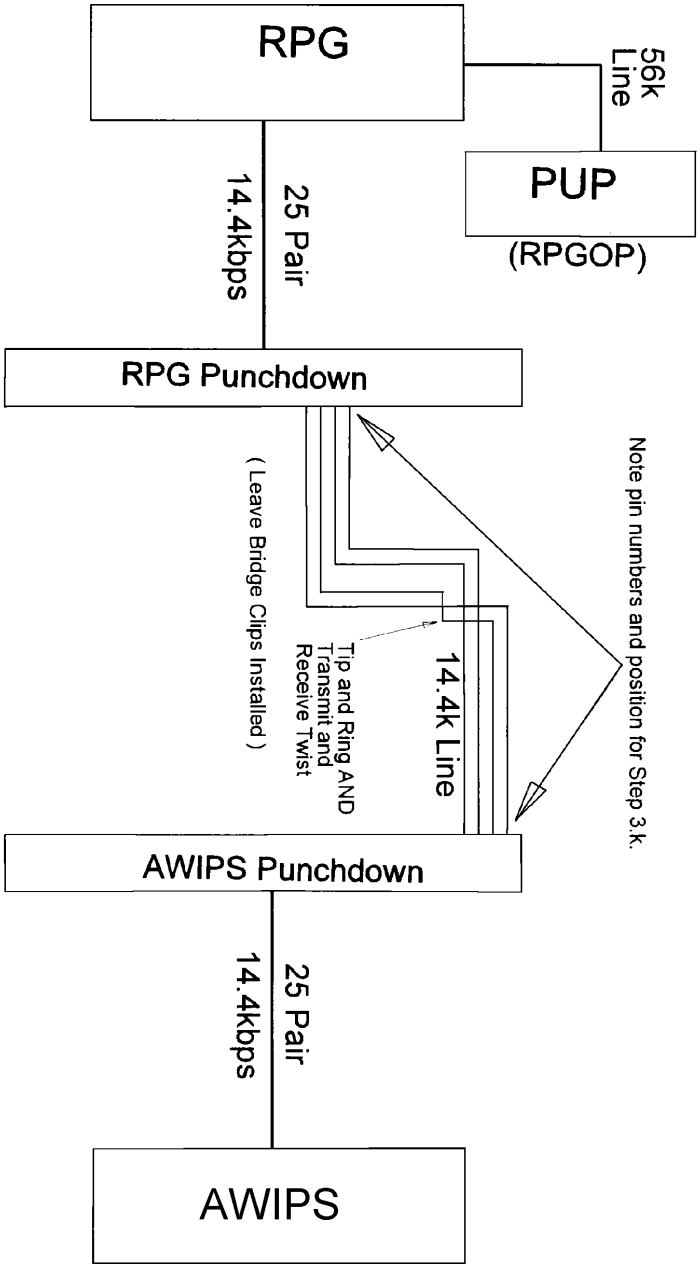
aa. Remove any temporary cross-connects between the PUP dial line punchdown block and the AWIPS dial line punchdown block. Record the location of any AWIPS dial line cross-connects here:_____

ab. Install a 2 wire cross connect between the TELCO punchdown block and the AWIPS dial line punchdown block. The location of the TELCO punchdown can be found by referring to site drawings for the PUP dial line or following the line from the PUP dial line punchdown block and the TELCO punchdown block. The location of the line for the AWIPS punchdown block can be found by referring to the site drawings, step 3.aa or by contacting PRC.

ac. Ensure all connections are solid.

ATTACHMENT 2 (Continued)

INSTALLATION OF KIT AB TO INSTALL AN A/B SWITCH TO THE 56 KBPS DEDICATED, 14.4 KBPS DEDICATED LINES

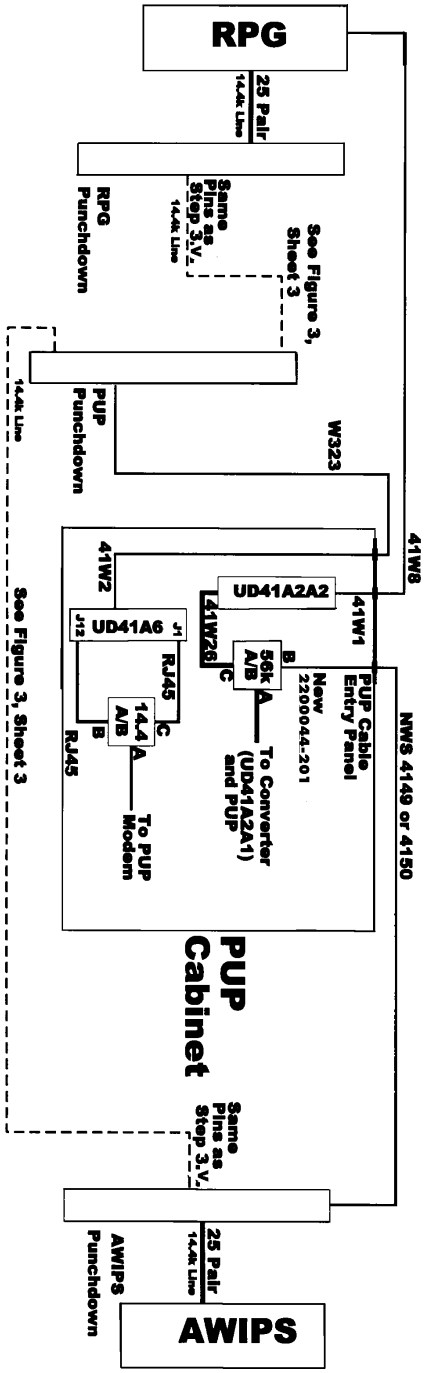


Initial Punchdown Block Configuration

Figure 3 Punchdown Block Configuration (Sheet 1 of 3)

ATTACHMENT 2 (Continued)

INSTALLATION OF KIT AB TO INSTALL AN A/B SWITCH TO THE 56 KBPS DEDICATED, 14.4 KBPS DEDICATED LINES

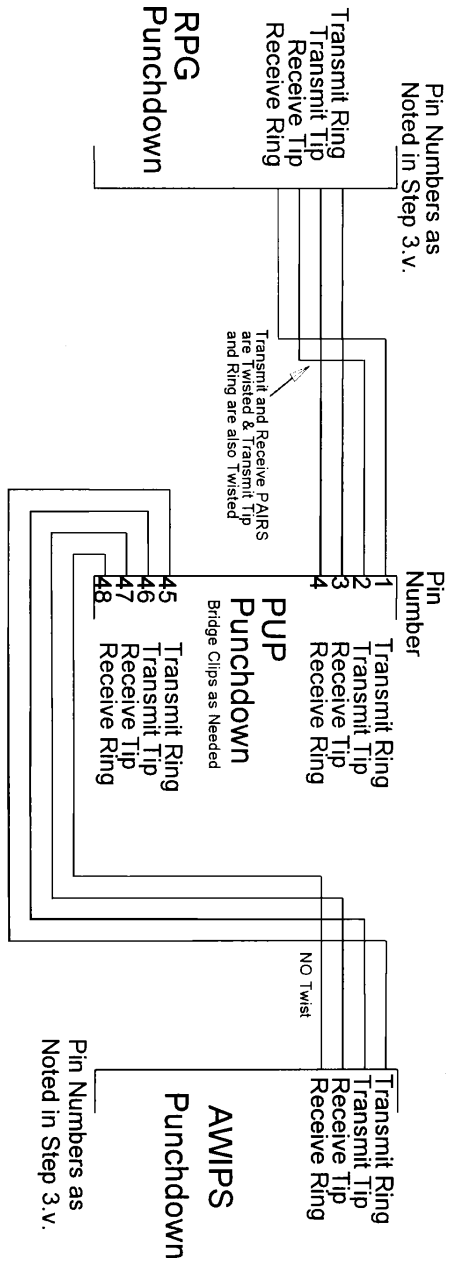


After Installation of Kit AB

Figure 3. Punchdown Block Configuration (Sheet 2 of 3)

ATTACHMENT 2 (Continued)

INSTALLATION OF KIT AB TO INSTALL AN A/B SWITCH TO THE 56 KBPS DEDICATED, 14.4 KBPS DEDICATED LINES



Wiring Details

Figure 3. Punchdown Block Configuration (Sheet 3 of 3)

ATTACHMENT 3

INSTRUCTIONS FOR INSTALLING KIT A OR KIT D DEDICATED (Codex 3263) 41A2A1-A3 PORT (RACK-MOUNTED) MODEM ADDITION

Tools Required

ESD Component Handling Kit

Initial Conditions/Preliminary Setup

See Figure 1 for assembly location.

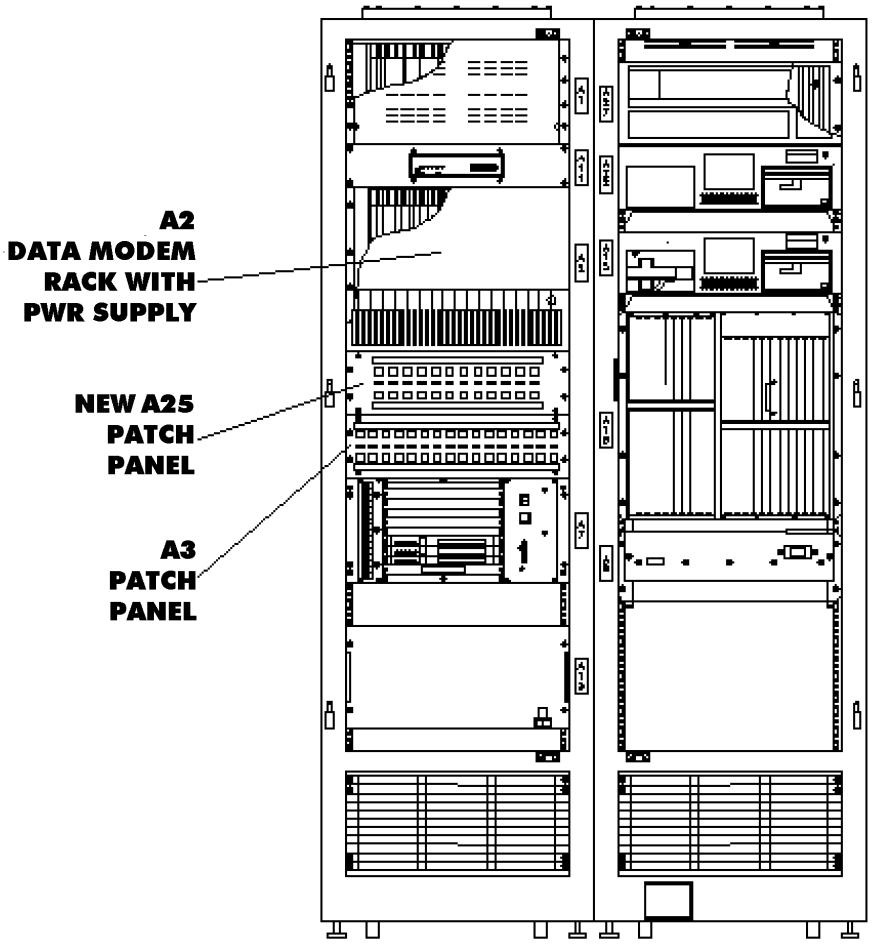


Figure 1 Equipment Location

ATTACHMENT 3 (Continued)

INSTRUCTIONS FOR INSTALLING KIT A OR KIT D DEDICATED (Codex 3263) 41A2A1-A3 PORT (RACK-MOUNTED) MODEM ADDITION

NOTE

Handling of electrostatic sensitive devices (ESDs). All WSR-88D circuit cards are ESD and must be handled using the special ESD handling procedures given below. A grounded conductive mat with wrist strap and clip lead, and a suitable conductive bag, are required to provide proper component protection. Use the following procedure.

****ESD** CAUTION **ESD****

The ESD symbol establishes the requirement that all paragraphs/ steps, figures with illustrations and diagrams identified by **ESD** must be followed as written and in accordance with ESD handling procedures. Failure to comply could result in damage to the equipment.

1. At the workbench perform the following steps:

   a. Place the ESD conductive mat on the work surface and connect the clip lead to cabinet ground.

   b. Put the ESD wrist strap on bare wrist and connect clip lead to chassis frame.

   c. Remove the ESD from its conductive package and place ESD on grounded conductive mat.

   d. Check/set the DIP switches on the new modem as shown in Figure 2. Switches 2 and 8 are **ON**; all others are **OFF**.

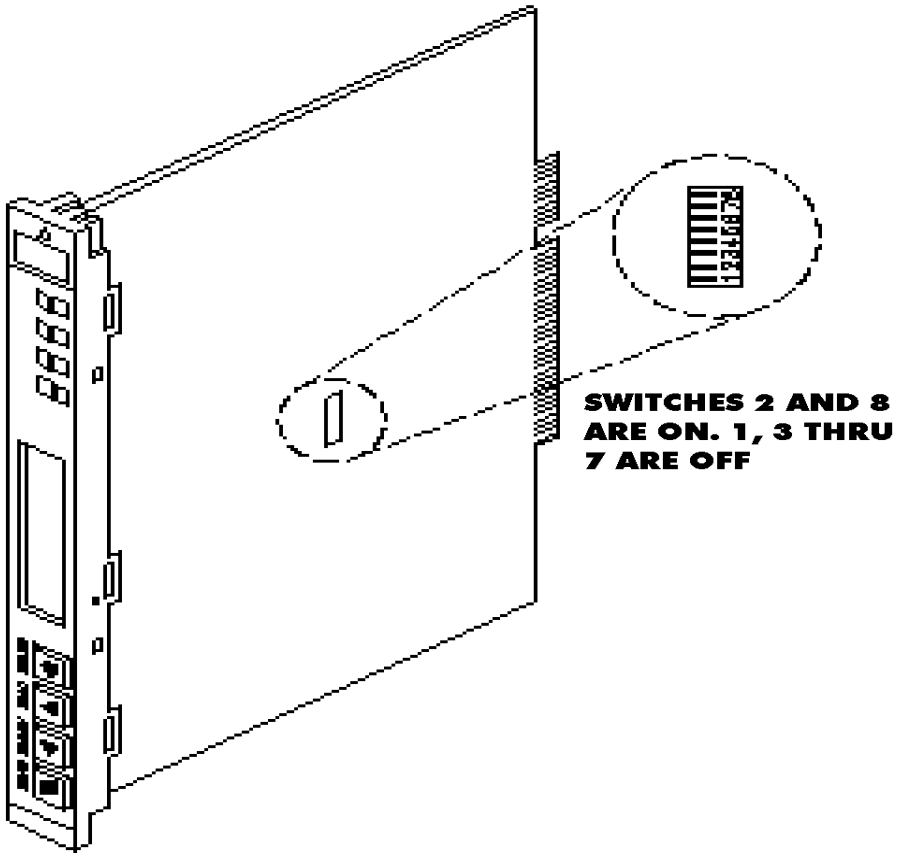


Figure 2 DIP Switch Location

e. Return the card to the conductive package for protection until installation.

2. Perform the following modem installation procedures:

   a. Verify all power has been removed from the equipment chassis.

   b. Put the ESD wrist strap on your bare wrist and connect clip lead to chassis frame.

   c. Open the left front and right back cabinet doors, then locate the Dedicated/Dial Modem Rack Assembly 41A2.

   d. Insert the key into the lock on the modem rack assembly door. Turn the key to unlock, and fully swing out the modem rack door assembly.

ATTACHMENT 3 (Continued)

INSTRUCTIONS FOR INSTALLING KIT A OR KIT D DEDICATED (Codex 3263) 41A2A1-A3 PORT (RACK-MOUNTED) MODEM ADDITION

e. Remove the filler plate from the number one (1) slot of the enclosure by rotating the card ejectors that hold the plate in place. Carefully guide the plate out from the enclosure as shown in Figure 3.

ATTACHMENT 3 (Continued)

INSTRUCTIONS FOR INSTALLING KIT A OR KIT D DEDICATED (Codex 3263) 41A2A1-A3 PORT (RACK-MOUNTED) MODEM ADDITION

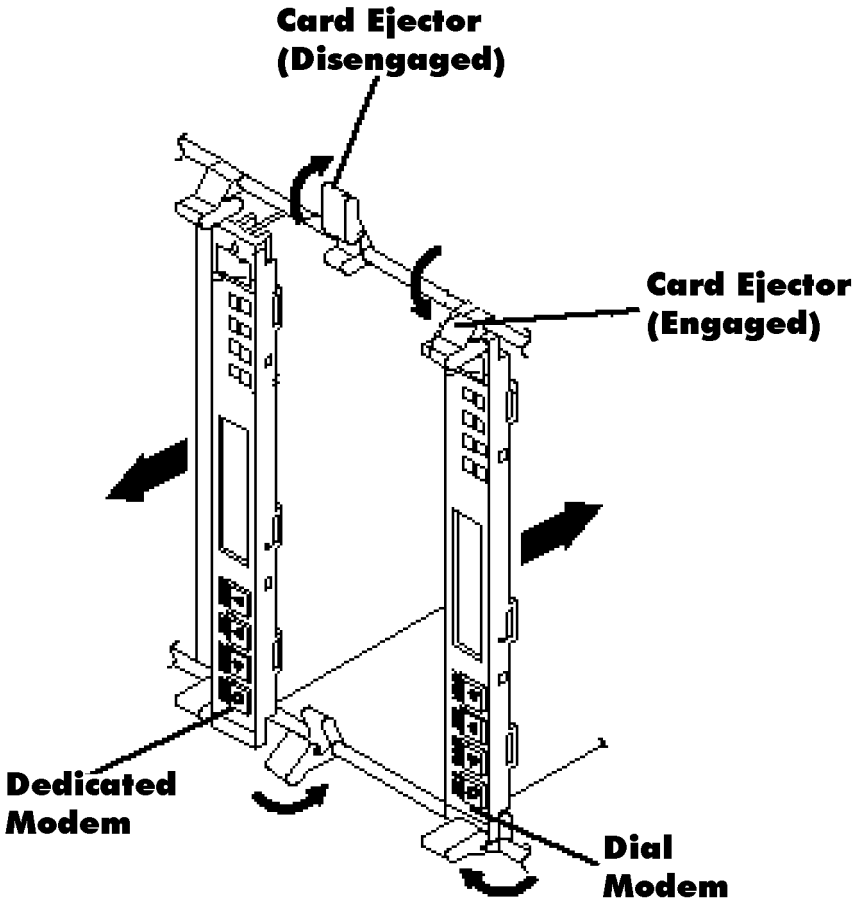


Figure 3 Dial (Codex 3262) and Dedicated (Codex 3263) Modem Card Removal and Replacement

f. Remove the new modem card from its conductive package.

g. Install replacement unit by sliding card into enclosure while ejectors are in the disengaged position as shown in Figure 3. When the card makes contact with the ejectors, swing the ejectors inward toward the card and press firmly to ensure proper seating of the card.

3. Procedures to install modem cables:

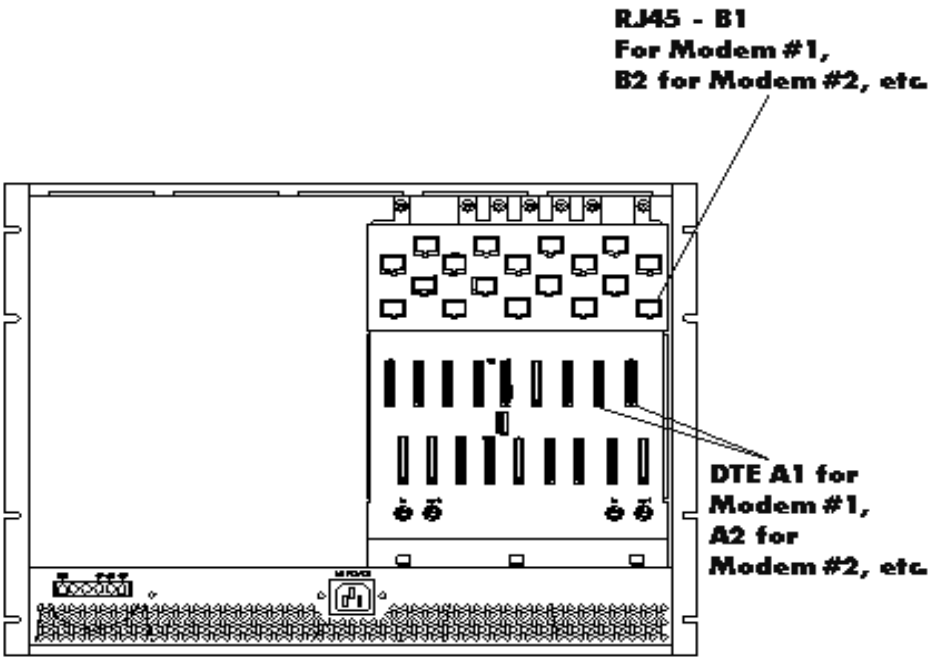


Figure 4 Dedicated/Dial Modem Rack Assembly (Codex 326X) with 9-Slot Backplane (Rear View)

INSTRUCTIONS FOR INSTALLING KIT A OR KIT D DEDICATED (Codex 3263) 41A2A1-A3 PORT (RACK-MOUNTED) MODEM ADDITION

a. Connect the mating end of the DTE cable (12212Ø3-53Ø, NSN 5995-Ø1-387-3817 for Kit "A" or 12223Ø2-3Ø7, NSN 5995-Ø1-4Ø7-2893 for Kit "D") to the modem backplane as indicated in Figure 4. (This will either be a DB25 connector (Kit D) or a Mini 26 connector (Kit A)).

b. Ensure cable 41W136, Dialup connection is attached to 417J4.

c. Connect the other end of this cable to J1 of the VME backplane. This will be a DB25 connector. If necessary, relocate this cable. Adaptation data will be updated during the procedures in ATTACHMENT 4.

4. Perform the following power up procedures:

a. Set Power Supply 41PS3 power switch to the **ON** position.

b. At the back of the data processor cabinet, turn **ON** the AC Power Distribution panel, 41A4Ø, main AC switch, CB1.

c. At the back of the data processor cabinet, turn **ON** the Swing-Out Power Supply ganged switch, CB1-3.

d. At the System Console, enter **Key 1,***password***<Return>**.

e. At the System Console, enter **PO ON<Return>**.

NOTE

If a new rev (V.34) 3263 modem has been delivered with this kit and when the 14.4 kbps line is switched from the AWIPS to the PUP, the modem LCD will read `DT32 14400` as opposed to the older rev 3263 modem which reads `DATA 14400 D/T`.

5. Perform the modem setup procedures in EHB 6-53Ø, step 6-6.3, in its entirety for the dedicated modem (Codex 3263) in 41A2.

6. Perform the following checkout procedures:

a. Set the the 56 kbps switch to **56k to RPGOP** and the 14.4 kbps switch to **14.4k to AWIPS**. This will ensure the system will come back up in the same configuration that it was brought down in.

b. Verify the PUP is operational at 56 kbps mode.

c. Verify the AWIPS is operational at 14.4 kbps mode.

d. If a problem exists with the 56 kbps line (PUP related problem) call the OSF Hotline. If a problem exists with the 14.4 kbps data link (AWIPS related problem), call the NCF.

ATTACHMENT 4

OPERATIONAL CONSIDERATIONS AND PRECEDURES FOR 56 KBPS AND 14.4 KBPS SWITCHES FOR AWIPS/RPGOP

OPERATIONAL CONSIDERATIONS AND PROCEDURES

Use of an A/B switch is necessary to redirect available WSR-88D 56 kbps and 14.4 kbps data feeds between the RPGOP and AWIPS workstations. Both the RPGOP and AWIPS operational system managers must compensate for the functionality changes that will result when they switch their respective workstations between the two data rates. The RPGOP operational system manager must make changes to the PUP's adaptation data and Routine Product Set (RPS) Lists to compensate for the reduced data rate and to protect pre-defined adaptation RPS Lists. The AWIPS operational system manager must make some changes to the AWIPS RPS Lists. These AWIPS changes are made through the RPS List Editor on a D2D workstation. Failure to compensate for the selected data rate on the workstations will reduce their functionality and cause narrowband load-shedding and other problems.

The RPGOP manager must consider other operational factors to optimize the PUP's functionality at the reduced data rate. Those locations that have Supplemental Associated PUPs will understand the limitations of the 14.4 kbps connection; however, they might not realize they must apply the APUP strategies to the RPGOP when using the A/B switch.

The table below shows the relationship between the NEXRAD software build in use and the maximum number of products available. The 56 kbps line can deliver up to 5Ø products. The current 14.4 kbps link can only deliver up to 31 products, less when operating on VCP 11.

RPG SIZE vs BUILD	RPGOP w/56 kbps	RPGOP w/14.4	RPGOP w/14.4 kbps	AWIPS w/56 kbps	AWIPS w/14.4 kbps	AWIPS w/14.4 kbps
Build 1Ø	5Ø		31	5Ø		31

Relationship between Build, Data Rate, and RPG size.

OPTIMIZE PUP FUNCTIONALITY

1. Construct new adaptation RPS Lists limited to 31 products (24 products for VCP 11) for the RPGOP intended to run at the 14.4 kbps rate. If site personnel do not construct new adaptation RPS lists, they risk losing existing adaptation RPS Lists designed to operate at the 56 kbps data rate. Switch procedures will require changing the RPGOP "flag" to of an APUP, and applications software will truncate existing "adaptation" RPS Lists "A" and "B".

   Adaptation RPS Lists "A" is loaded into memory by default when the radar first switches to Precip Mode (Mode A). Adaptation RPS List "B" is loaded into memory by default when the radar switches to Clear Air Mode (Mode B). If the site applies edits to existing RPGOP adaptation RPS Lists while operating in the APUP (14.4 kbps) mode, product lines 32 and higher will be permanently lost upon restoration of the RPGOP configuration.

   If your site has predefined adaptation RPS Lists **A-D** for 56 kbps operations, you should copy adaptation RPS List "**A**" to list "**E**" and List "**B**" to "**F**" or other unused RPS List slots. Then you should define RPS Lists G-"x" ("x" = how ever many lists are necessary) to optimize use of the PUP while running at the 14.4 kbps data rate. Failure to optimize the 14.4 kbps RPS Lists will probably result in narrowband load-shedding.

   In this scenario, consider establishing Lists "G" and "H" as the 14.4 kbps default "A" and "B" lists. This will allow to you read them "to and from" memory when switching back and forth from 56 kbps to 14.4 kbps. Then simply replace RPS Lists "A" and "B" with the appropriate saved adaptation list (for example, "E" and "F" for going to 56 kbps or "G" and "H" when going to 14.4 kbps).

2. The site must update station documentation to delineate the new RPS Lists and their intended use. At a minimum this should include the changes made to RPS Lists "A" and "B".

3. Enable as many products as possible that were lost from the reduced RPS List as Alert Paired Products. Enter **AD,A,***Alert Area* #**<Return>** and toggle the `SEND PROD (Y)es` flag in the PUP Alert Processing Edit screen for each alert area, but be aware overloading the PUP with alerts may result in narrowband load-shedding.

4. RPG handling of alerts may be erratic while the PUP is operating without the RPGOP flag being set (see NOTE on page B16, step 6).

5. Carefully evaluate the number of product background map pairings in use by entering **AD,B,***Prod* #**<Return>**. Pairing too many background maps with the products will decrease PUP performance.

6. Carefully evaluate the number of products set for auto archiving on the newly defined adaptation RPS Lists. Reducing the number of products being archived will improve PUP performance while auto archiving.

7. Modify the PUP Hardware Implementation extended adaptation screen by entering **AD,*****,***,9,Ø<Return>** to enable a second dedicated hardware connection. ***Set offset ØØ half word for*** the number of dedicated lines. In nearly all instances this will result in a half word of ØØØ2, one line for the 56 kbps connection and one for the 14.4 kbps connection.

8. Modify the PUP Narrowband Definition screen **AD,*****,N<Return>** by adding line 2 to enable the new 14.4 kbps connection, as:

   2 JØ2 ARPG 144ØØ DEDIC

9. The WSR-88D Communication Documentation notebook will show the assigned dedicated narrowband line the AWIPS/PUP will use. This documentation is vital for empowering the office staff to monitor and maintain the AWIPS/APUP 14.4 kbps dedicated connection. You should ensure the Station UCP Shift Change Checklist clearly indicates which narrowband line serves the AWIPS/PUP.

10. The PUP software has to be rebooted for changes to take effect.

VERIFY/CREATE THE RPS LISTS FOR AWIPS

The following steps on pages D4 through D14 are provided through the AWIPS program. You will have to create the necessary scripts using the following procedures. If you experience difficulty entering or executing the scripts please contact the W/OSO32 AWIPS Maintenance Program Engineer (MPE) Franz Zichy at (3Ø1) 713-1833 ext 128, or by pager (3Ø1) 61Ø-171Ø.

General

AWIPS currently has three default RPS lists: `KXXX.clear-air`, `KXXX.storm`, and `KXXX.current`. Two actions occur when the Radar switches between the precipitation and clear air modes:

- The AWIPS software invokes the RPS lists
- The AWIPS software loads the `KXXX.storm` and `KXXX.clear-air` RPS Lists into the `KXXX.current` list automatically when the radar switches between precip "mode "A" and clear-air "mode B"

Selecting one of the two data rates (56 kbps or 14.4 kbps) imposes the same RPS List limitations on both the AWIPS and the RPGOP. Therefore, the same operational considerations given to the RPGOP must be given to the AWIPS.

The site should construct and save RPS Lists appropriate for the intended data rate. Instructions to standardize and optimize the RPS Lists between the RPGOP and AWIPS are as follows:

Procedure

1. From the D2D menu bar, select the appropriate radar button (i.e. KEAX).

2. Move down the list and select **Applications** then **RPS List Editor**.

3. Select **File** then **New** then **Add** to create new RPS Lists.

4. Select the product characteristic and then select **OK** for each product desired.

5. Each time a new list is created, select **Save as....** and save the lists with a descriptive filename (14.4k_clear-air, 14.4k_precip, 14.4k_vcp11, 56k_clear-air, 56k_precip, 56k_vcp11).

6. An example of an RPS list selection window is shown in the table below. ***Note*** the RPS list is site dependent.

Open
KXXX.clear-air KXXX.storm KXXX.current 14.4k_clear-air 14.4k_precip 14.4k_vcp11 56k_clear-air 56k_precip 56k_vcp11

7. Log in to DS1 as awipsusr.

8. Enter in the following commands:

   cd /data/fxa/rps-lists<Enter>
   chmod 775 14.4*<Enter>
   chmod 775 56*<Enter>
   chmod 775 K*<Enter>
   chown fxa:fxalpha 14.4*<Enter>
   chown fxa:fxalpha 56*<Enter>
   chown fxa:fxalpha K*<Enter>

9. Type **exit** then **su -i root/fxa<Enter>**.

NOTE

The wfo56k and the wfo144k scripts will automatically copy the appropriate RPS lists into the correct directories.

This completes the verification and/or creation of the RPS Lists procedure.

AWIPS SITE PREPARATION FOR THE 56 KBPS AND 14.4 KBPS A/B SWITCH

General

The following instructions outline two procedures necessary for preparing AWIPS before activating the 56 kbps and 14.4 kbps A/B switch:

- Create the portInfo.56k and portInfo.144k files
- Edit the "portInfo.56k" and "portInfo.144k" files
- Verify the existing and/or creating new RPS Lists

CREATING PORTINFO.56K AND PORTINFO.144K FILES

In order for AWIPS to support the logical port assignment for the 56 kbps and 14.4 kbps lines, it is necessary to copy the "portInfo.txt" file to create the "portInfo.56k" and "portInfo.144k" files.

Procedure

1. Log on to a Telnet window and log on to DS1 as root/fxa.

2. Change to the portInfo.txt directory:

   cd /awips/fxa/data/localizationDataSets/<site id><Enter>

3. Verify the portInfo.txt file exists in the directory:

   ll port*<Enter>

4. Copy the "portInfo.txt" file to create the "portInfo.56k" and "portInfo.144k" files in the /awips/fxa/data directory:

   cp -p portInfo.txt /awips/fxa/data/portInfo.56k<Enter>
   cp -p portInfo.txt /awips/fxa/data/portInfo.144k<Enter>

5. Change directories and list the directory to verify the changes were saved.

   cd /awips/fxa/data<Enter>
   ll port*<Enter>

This completes the "portInfo.xxx" create procedure.

EDITING THE "portInfo.56k" AND "portInfo.144k" FILES

General

After the "portInfo.56k" and "portInfo.144k" files have been created, it is necessary to change the content of the file to reflect the correct port assignment and maximum amount of products allowed in the RPS list.

Procedure

1. Set the terminal environment to vt1ØØ:

   setenv TERM vt1ØØ<Enter>

2. Open the vi editor to edit the portInfo.56k file:

   vi portInfo.56k<Enter>

3. The listing should be similar to the one shown below:

   The portInfo.txt configuration file gives information on the port number, board number, radar numeric ID, radar four letter ID, and maximum number of products that can be requested in an RPS List.

portNo	boardNo	radarId	radarMnemonic	maxRpsProds
3	Ø	3Ø3	KXXX	2Ø

   The portNo and boardNo indicate which dedicated radar ID corresponds to which wfoApi config file. The wfoApi logs are found on DS1, and may be viewed to help you isolate radar problems. Each site has two boards and four ports per board. The boards are numbered Ø through 1, and the ports are numbered Ø through 3. Thus, a portNo of Ø and a boardNo of 1 would be represented by wfoApi cs_config4 on DS1.

   The first line of the portInfo.txt file shown contains a portNo of Ø and a boardNo of Ø. This indicates the first port on the first radar board.

4. Change the port assignment number from 3 to **Ø** (signifying a 56 kbps port) and the maximum RPS product list from 2ø to **5Ø** (VI editing commands are **r** for replace, **i** for insert, and **x** for delete).

5. Press **<Esc>** then **:wq!**.

6. Now view the "portInfo.144k" file:

   cat portInfo.144k<Enter>

7. Verify the first group is a 3 (signifying a 14.4 kbps port) and that the fifth group is a 31 (for a 14.4 kbps). If changes need to be made, edit the portInfo.144k file to make the appropriate changes.

8. Verify the file changes were saved by entering:

cat portInfo.56k<Enter>
or
cat portInfo.144k<Enter>

This completes the "portInfo.xxx" edit procedure.

56 KBPS LINE ACTIVATION SCRIPT

General

A sample 56 kbps activation script is shown below. Before the script is run, it is necessary to edit the script to change site dependent descriptors. The instructions below apply to the 56 kbps and 14.4 kbps scripts. All site dependent descriptors have been annotated in bold (LWX or KLWX) below.

Procedure

1. Call (3Ø1) 713-1284 to have the NCF FTP the correct script files that reflect your site's software version:

   For AWIPS Build 4.Ø.X sites

   wfo56k
   wfo144k

   For AWIPS Build 4.1 sites

   wfo56k.41
   wfo144k.41

2. Log on to DS1 as **root/fxa** user.

3. Type **cd /awips/fxa/bin** to change to the location of the scripts.

4. Enter **ll wfo*<Enter>** and verify the script files are present.

5. Start the vi editor by entering **vi wfo56k<Enter>**.

6. Type **:1,$s/LWX/<local siteid>/g** then **<Enter>**. Global exchange for LWX for the local siteid. Repeat this step for wfo144k.

7. If the Radar ID is different than the site ID, type **:1,$s/KLWX/<local radarid>/g**. Otherwise skip to step 8.

8. Cursor down to line 16 to add or subtract workstations to match the site configuration, as shown in the figure below:

   for i in as1 as2 ds2 ws1 ws2 ws3 ws4 ws5

9. Save the changes by pressing **Esc** and **:wq!** then **<Enter>**.

10. Repeat steps 5 through 9 for the wfo144k script file.

11. Type **wfo56k** to run the scripts.

12. After the script has been run, reset the Radar line by typing one of the following commands:

For Simpact Board	Ports	Command
Ø	**Ø, 1, and 3**	**icpResetØ**
1	**4 and 6**	**icpReset1**

```
#! /bin/sh
# This script is to activate the 56 kbps line
export FXA_HOME=/awips/fxa
export LOG_DIR=/data/logs/fxa
echo
echo "Running as ‘whoami'"
echo
echo "Making a copy of the portInfo.txt file"

cp /awips/fxa/data/localizationDataSets/LWX/portInfo.txt
     /awips/fxa/data/localizationDataSets/LWX/portInfo.sav (All one command line)
echo ""
echo  "Stopping the Radar"
/awips/fxa/bin/stopRadar

echo "Copying the 56 kbps portInfo.txt file to all other devices"


for i in as1 as2 ds2 ws1 ws2 ws3 ws4 ws5 <-------- Add or subtract workstations as necessary

do
echo $i
rcp -p /awips/fxa/data/portInfo.56 kbps
$i:/awips/fxa/data/localizationDataSets/LWX/portInfo.txt
done

echo "Activating the portInfo.txt and default RPS lists on the DS"
cp /awips/fxa/data/portInfo.56 kbps /awips/fxa/data/localizationDataSets/LWX/portInfo.txt
cp /data/fxa/rps-lists/56_clear-air /data/fxa/radar/lists/KLWX.clear-air
cp /data/fxa/rps-lists/56_precip /data/fxa/radar/lists/KLWX.storm

echo "Starting Radar"
/awips/fxa/bin/startRadar
clear
echo "You are now ready to turn the A/B switch to the 56 kbps position"
```

14.4 KBPS LINE ACTIVATION SCRIPT

1. Site dependent changes must also be performed on the 14.4 kbps activation script. Follow the edit change procedures outlined for the 56 kbps activiation script.

2. Type **wfo144k<Enter>** to run the script.

```
#! /bin/sh
# This script is to activate the 14.4k line
export FXA_HOME=/awips/fxa
export LOG_DIR=/data/logs/fxa
echo
echo "Running as ‘whoami'"
echo
echo "Making a copy of the portInfo.txt file"
cp /awips/fxa/data/localizationDataSets/LWX/portInfo.txt
    /awips/fxa/data/localizationDataSets/LWX/portInfo.sav (All one command line)
echo ""
echo  "Stopping the Radar"
/awips/fxa/bin/stopRadar

echo "Copying the 14.4 kbps portInfo.txt file to all other devices"



for i in as1 as2 ds2 ws1 ws2 ws3 ws4 ws5  <-- Add or subtract workstations as necessary

do
echo $i
rcp -p /awips/fxa/data/portInfo.144k $i:/awips/fxa/data/localizationDataSets/LWX/portInfo.txt
done

echo
echo "Activating the portInfo.txt and default RPS lists on the DS"
cp /awips/fxa/data/portInfo.144k /awips/fxa/data/localizationDataSets/LWX/portInfo.txt
cp /data/fxa/rps-lists/14.4_clear-air /data/fxa/radar/lists/KLWX.clear-air
cp /data/fxa/rps-lists/14.4_precip /data/fxa/radar/lists/KLWX.storm

echo "Starting Radar"
/awips/fxa/bin/startRadar
echo "You are now ready to turn the A/B switch to the 14.4 kbps position."
```

PROCEDURE TO SWITCH 56 kbps LINE FROM RPGOP TO AWIPS

1. Open the radar status message dialogue box on AWIPS to monitor the messages between AWIPS and the RPG.

2. At the UCP Applications Terminal disconnect the RPGOP dedicated line at the UCP by entering **U,C,D,1<Return>** and the AWIPS dedicated line:
   U,C,D,*NB Line # (Ref. Page D3 Step 9)***<Return>**

3. After AWIPS registers the line disconnect, open an XTERM window on AWIPS and enter the following sequence of commands:

   a. **rlogin ds1<Enter>** (as root).

   b. **su fxa<Enter>**.

   c. **cd /awips/fxa/bin<Enter>**.

   d. Run **wfo56k.41 or 40<Enter>**.

4. At the RPGOP Applications Terminal, command a disconnect of the RPGOP dedicated line at the PUP by entering **C,C,D,1<Return>**.

5. Enter **S,C<Return>** on the PUP Applications Terminal command line to verify the line disconnect. The status of line 1 should read DSA DSC (Disabled, Disconnected).

6. Modify the PUP extended adaptation APUP/RPGOP flag to that of an APUP by entering **AD,*****,***,5,Ø<Return>**. Modify offset ØØ from ØØØ1 to **ØØØØ** and then press **<Return>** and **F1**, to designate APUP and save the changes.

NOTES

With the adaptation set for the RPGOP flag (ØØØ1) at the higher data rate, the PUP sends a 1Øk buffer to the RPG. Setting the flag for an APUP at the 14.4 kbps rate causes the PUP to send a 1k buffer. Failure to modify the APUP/RPGOP setting to correspond with the reduced data rate will result in RPG Read Buffer Overflow Errors.

Do not use PUP Applications terminal "Control Shutdown" C,S<I or N><Return> option. Use of this option will cause the line disconnected in steps 4 and 5 to return to an Enabled state.

7. Terminate the RPGOP system software by typing **PUPDOWN<Return>** at the PUP System Console.

Switch Control Positions

Switch	Position	Connection
56 Kbps	56 K to AWIPS	AWIPS to 56 K dedicated RPG feed
14.4 Kbps Dedicated	14.4 K to RPGOP	14.4 K dedicated to RPGOP

8. Move the 56 kbps switch, NSN 593Ø-Ø1-437-Ø752, to the 56K to AWIPS position.

9. Move the 14.4 kbps switch, NSN 5895-Ø1-458-63Ø9, dedicated to the 14.4K to RPGOP position.

10. Restart PUP applications by entering **PUPUP<Return>** at the PUP System Console to write the extended adaptation change made in step 6 to memory.

11. Following the PUP restart, replace RPS List "A" and "B" with the appropriate 14.4 kbps RPS List discussed in on page B2 step 1. For example, the commands AD,R,A,RE,G<Return> and AD,R,B,RE,H<Return> will replace list "A" with list "G" and will replace list "B" with list "H". This will ensure that an appropriate 14.4 kbps adaptation "default" RPS List ("A" or "B") will be used to replace the "current" (working) RPS List with any subsequent PUP restarts or RPG operational weather mode changes.

12. Replace the current RPS List with the appropriate 14.4 kbps adaptation RPG List "A" or "B" ("G" or "H"). For example, the command R,RE,G<Return> will replace the current RPG List with list "G", which would be appropriate if in Precipitation mode, while the command R,RE,H<Return> will replace the current RPS List with "H" which would be appropriate for Clear Air mode.

13. Connect the RPGOP 14.4 kbps dedicated line at the PUP Applications Terminal by entering, **C,C,C,2<Return>**.

14. On the command line, enter **S,C<Return>** to review the status.

15. Connect the RPGOP and AWIPS dedicated lines at the UCP Applications Terminal by entering the following:

    U,C,C,1<Return>
    U,C,C,*NB Line # Previously Referenced***<Return>.**

16. On AWIPS, after you see the line connect message in the radar status dialogue box for each radar, ensure the appropriate RPS list (clear-air or storm) has been loaded.

ATTACHMENT 4 (Continued)

OPERATIONAL CONSIDERATIONS AND PRECEDURES FOR 56 KBPS AND 14.4 KBPS SWITCHES FOR AWIPS/RPGOP

NOTES

If either the RPGOP or AWIPS lines fail to connect, a disconnect/ connect command must be issued by entering:

U,C,D,*NB Line(s) Referenced Above***<Return>**

followed by a

U,C,C,*NB Line(s) Referenced Above***<Return>**

If AWIPS fails to display a connect message, call the NCF for a SIMPACT reset.

PROCEDURE TO SWITCH 56 kbps LINE FROM AWIPS TO RPGOP

1. Open the radar status message dialogue box on AWIPS to monitor the messages between AWIPS and the RPG.

2. At the UCP Applications Terminal, disconnect the AWIPS dedicated line at the UCP by entering **U,C,D,1<Return>**, and then the RPGOP dedicated line by entering:

   U,C,D,*NB Line # (Ref. Page B3, Step 9)***<Return>**.

3. After AWIPS registers the line disconnect, open an XTERM window on AWIPS and enter the following sequence of commands:

   a. **rlogin ds1<Enter>** (as root)

   b. **su fxa<Enter>**

   c. **cd /awips/fxa/bin<Enter>**.

   d. Run **wfo144.41 or 40k<Enter>**

4. At the PUP Applications Terminal, disconnect the RPGOP dedicated line by entering, **C,C,D,2<Return>**.

5. Enter **S,C<Return>** on the PUP Applications Terminal command line to verify the line disconnect. The status of line 1 should read DSA DSC (Disabled, Disconnected).

6. Modify the PUP extended adaptation APUP/RPGOP flag to that of a RPGOP by entering: **AD,*****,***,5,Ø<Return>**. Modify offset ØØ from ØØØØ to **ØØØ1** and then press **<Return>** and **F1** to save the changes made.

7. Terminate the RPGOP system software by typing **PUPDOWN<Return>** at the PUP System Console.

NOTE

Do not use PUP Applications terminal "Control Shutdown" C,S<I or N><Return> option. Use of this option will cause the line disconnected in steps 4 and 5 to return to an Enabled state.

Switch Control Positions

Switch	Position	Connection
56 Kbps	56 K to RPGOP	RPGOP to 56K dedicated RPG feed
14.4 Kbps Dedicated	14.4 K to AWIPS	14.4 K dedicated to AWIPS

8. Move the 56 kbps switch, NSN 593Ø-Ø1-437-Ø752, to the 56K to RPGOP position.

9. Move the 14.4 kbps switch, NSN 5895-Ø1-458-63Ø9, dedicated to the 14.4K to AWIPS position.

10. Restart PUP applications by entering **PUPUP<Return>** at the PUP System Console to write the extended adaptation change made in step 6 to memory.

11. Following the PUP restart, replace the working RPS Lists "A" and "B" with the appropriate 56 kbps RPS List discussed in the RPGOP page B2, step 1. For example, the command AD,R,A,RE,E<Return> or AD,R,B,RE,F<Return> will replace list "A" with list "E" or will replace list "E" with list "B" with list "F". This will ensure that an appropriate 56 kbps adaptation "default" RPG lList ("A" or "B") will be used to replace the "current" (working) RPS List with any subsequent PUP restarts or RPG operational weather mode changes.

12. Replace the current RPS List with the appropriate 56 kbps adaptation RPS List "A" or "B" ("E" or "F"). For example, the command R,RE,E<Return> will replace the current RPS List with list "E," which would be appropriate if in Precip mode, while the command R,RE,F<Return> will replace the current RPS List with "F" which would be appropriate for "Clear Air mode."

13. Connect the RPGOP 56 kbps dedicated line at the RPGOP Applications Terminal by entering, **C,C,C,1<Return>**. The NEXRAD Unit Status graphic should display on the graphics terminal.

14. At the command line, enter **S,C<Return>** to view the status.

15. Connect the RPGOP and AWIPS dedicated lines at the UCP Applications Terminal by entering the following:

    U,C,C,1<Return>

    U,C,C,*NB Line # Previously Referenced***<Return>**

16. On AWIPS, after you see the line connect message in the radar status dialogue box for each radar, ensure the appropriate RPS list (clear-air or storm) has been loaded.

ATTACHMENT 4 (Continued)

OPERATIONAL CONSIDERATIONS AND PRECEDURES FOR 56 KBPS AND 14.4 KBPS SWITCHES FOR AWIPS/RPGOP

NOTE

If either the RPGOP or AWIPS lines fail to connect, a disconnect/ connect command must be issued by entering:

U,C,D,*NB Line(s) Referenced Above***<Return>**

followed by a

U,C,C,*NB Line(s) Referenced Above***<Return>**

If AWIPS fails to display a connect message, call the NCF for a SIMPACT reset.

NWS: EHB-6, Modification Note 50

ATTACHMENT 5

EFFECTIVITY

Site Name	SID	Org Code	Kits Required AB	A	D	PP
Eastern Region						
WSFO Sterling, VA	LWX	WN9931	1	-	1	1
Southern Region						
WSO Houston/Galveston, TX	HGX	WP9935	1	-	1	1
WSO Melbourne, FL	MLB	WP9204	1	-	1	1
WSFO Miami, FL	MFL	WP9918	1	1	-	1
Central Region						
WSFO Denver, CO	DNR	WR9469	1	1	-	1
WSO Dodge City, KS	DDC	WR9451	1	-	1	1
WSO Goodland, KS	GLD	WR9465	1	1	-	1
WSO Grand Island, NE	GID	WR9552	1	1	-	1
Northern Indiana, IN	IWX	WR9534	1	-	1	1
WSFO St Louis, MO	LSX	WR9971	1	-	1	1
WSFO Topeka, KS	TOP	WR9456	1	1	-	1
WSO Wichita, KS	ICT	WR9450	1	1[a]	1[a]	1
Western Region						
WSFO Phoenix, AZ	PSR	WT9278	1	1	-	1

a. Use existing equipment.

NWS: Modification Note 50

ATTACHMENT 6

INSTALLATION OF AN A/B SWITCH

Site Name: _____

Site Identifier: _____

Total Time to complete this Modification Document: _____

Technician's Name(s): _____

Technician's Phone Number: _____

Modem Type Installed: _____

Date Completed: _____

Problem(s) Encountered:

_____

_____

_____

_____

Upon completion of this form, mail, fax, or e-mail this information to the OSF:

1. Mailing Address: System Support Branch, Logistics Section
   WSR-88D Operational Support Facility
   3200 Marshall Ave, Suite 101
   Norman, OK 73072-8028

2. FAX Number: (405) 366-6553,
   ATTN: Logistics Section

3. E-mail Address: Logistics@osf.noaa.gov